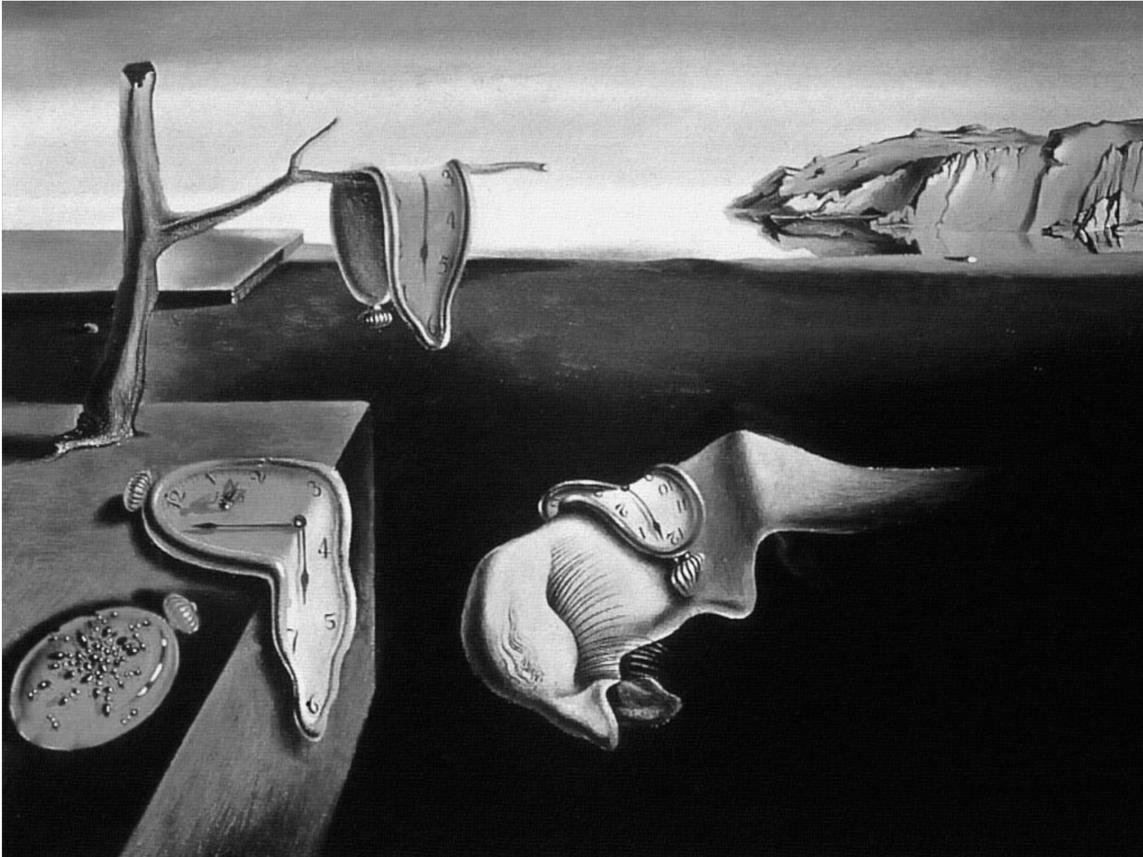


Semantic Variation in Tense and Aspect

Proseminar in Semantic Theory (Linguistics 720)

Syllabus



Tuesday, Thursday 1:00 – 2:15
Integrative Learning Center N458

Course Website:
<http://people.umass.edu/scable/LING720-FA15/>

Course Instructor: Seth Cable
Course Mentor: Barbara Partee

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1. General Overview

The purpose of this course is to serve as a bridge between the introductory graduate semantics courses (610, 620) and the more advanced semantics seminars. Typically, a specific subject is covered in more depth than is done in the intro classes, but the discussion is paced at a level appropriate for second- and third-year students.

The subject of this proseminar will be semantic variation in the tense and aspect systems of the world's languages. We will begin with an overview of theories of tense/aspect semantics, and then quickly move to several topics at the forefront of current research.

General Course Outline

1. Background on the Semantics of Tense, Aspect, and Embedded Tense (Week 1-2)
 2. Variation in the Interpretation of Embedded Tenses (Week 3-4)
 3. Variation in the Semantics of Perfective and Imperfective Aspect (Week 5-6)
 4. Varieties of 'Tenseless' Languages (Week 7-8)
 5. The Semantics of (Present) Perfect Across Languages (Week 9-10)
 6. Do Adnominal Tenses Exist? (Week 11)
 7. The Semantics of Graded Tenses (Week 12)
 8. 'Discontinuous Past' Markers (Week 13)
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2. Course Requirements

2.1 Short Assignments

As this course is a bridge between the intro courses and the advanced seminars, it is typical for students to receive regular weekly assignments, especially towards the beginning of the term. At first, the purpose of these assignments will simply be to make sure that we're all 'on the same page' regarding the course material. As the course progresses, however, these assignments will become more open-ended and challenging, especially as they move us into the second 'phase' of the course work (Section 2.2).

Students are permitted (even encouraged) to work with one another on these assignments. However, each student is responsible for writing up their own assignment.

2.2 Description and Analysis of Tense / Aspect System of Some Language

Throughout the course, each enrolled student will be applying the formal tools and theoretical proposals studied in class to a language of their choice. The language should not be English, but can otherwise be 'familiar'. The language should be one that the student has access to native-speakers of, potentially themselves.

Students must inform me of their chosen language by the end of the second week (**September 18th**). Following this date, the short assignments will contain an increasing amount of material focused upon the students' chosen languages.

On the last day of class (**December 10th**), each student will share some of their key findings from these assignments in short, 15-minute presentations.

2.3 In Class Presentation of Assigned Reading

Each student will be responsible for presenting either a ‘full’ article or pair of ‘short’ articles, taken from the ‘required reading’ list for units 3-8. These readings can be found on the Moodle for the course. Students must inform me of the reading(s) they will present by the end of week 3 (**September 25th**).

2.4 Final Squib

Unless they are ‘two-papering’ the course, each student will be required to submit a final squib by **December 21st**. The only rock-solid requirement on this squib is that it be a semantics paper, and that it be in some way on tense and aspect.

Students are warmly encouraged – though not required – to build their squib upon the description and analysis of their chosen language (Section 2.2). That is, the final squib could be a more focused discussion of a puzzle/problem encountered in the student’s chosen language, but it could also be something else entirely (e.g. a novel criticism of ‘extended now’ theories of the perfect).

Students should meet with me as early as possible regarding the topic of their squib, but no later than **October 30th**. You should also let me know by this date if you intend to two-paper the course.

Major Piece of Advice: MEET WITH US!

Students are strongly, enthusiastically encouraged to meet with Barbara and me as much as possible. Please also feel free to email – or simply chat – with us on anything at all.

Please be sure to seek us out if you are having any difficulty at all with the course material.

3. Various Dates of Interest and Importance

- September 18 **Choose Language of Study** (Section 2.2)
- September 25 **Choose Reading for In-Class Presentation** (Section 2.3)
- October 13 No Class (Monday Schedule)
- October 30 **Choose Topic for Final Squib** (Section 2.4)
- November 26 No Class (Thanksgiving Break)
- December 10 Last Day of Class / **Short Student Presentations**
- December 21 **Final Squib Due**
- December 28 Final Grades Due (by Midnight)

4. More Detailed Overview of Course Content

The following schedule of topics and course readings is subject to change.

4.1 Background on the Semantics of Tense, Aspect, and Embedded Tense (Approximately Week 1 and 2)

Students will be introduced to several leading proposals concerning the semantics of tense and aspect, in both matrix and embedded clauses. These proposals will all lie within the general ‘Neo-Reichenbachian’ (or ‘Kleinian’) class of theories. Under such theories, tense functions to restrict the relation between the Utterance Time (or point of evaluation) and a so-called ‘Reference Time’ (or ‘Topic Time’), while aspect restricts the relation between the ‘Reference Time’ (‘Topic Time’) and the Event Time.

The most difficult issues in the semantics of tense all surround the interpretation of tense in embedded clauses. Students will get an initial introduction to the key puzzles, as well as a few key, influential approaches to those puzzles. One of the puzzles reviewed here is the (alleged) ambiguity of sentences like the (1) in English, which is claimed to have a so-called ‘simultaneous reading’ and a so-called ‘backshifted reading’.

- (1) Dave said that he was eating.
- a. Simultaneous Reading: *Dave said “I am eating.”*
 - b. Back-Shifted Reading: *Dave said “I was eating.”*

This ambiguity is sometimes discussed (especially in the descriptive literature) under the moniker of ‘Sequence of Tense’. We will review a few highly influential – and deeply similar – approaches to generating this ambiguity. We will also see how these approaches extend to the oft-noted three-way ambiguity found with tensed relative clauses.

- (2) Dave married a woman who lived in India.
- a. Simultaneous Reading: *She lived in India at the time of the marriage.*
 - b. Back-Shifted Reading: *She lived in India prior to the marriage.*
 - c. Forward-Shifted Reading: *She lived in India after the marriage*

Required Readings:

- Ogihara, Toshiyuki. 2011. “Tense.” In Maienborn, Claudia, Klaus von Stechow, and Paul Portner (eds) *Semantics: An International Handbook of Natural Language Meaning*. De Gruyter. pp. 1463-1484
- Kusumoto, Kiyomi. 2005. “On the Quantification Over Times in Natural Language.” *Natural Language Semantics* 13: 317-357.
- von Stechow, Arnim. 2009. “Tenses in Compositional Semantics.” In Klein, Wolfgang and Ping Li (eds) *The Expression of Time*. De Gruyter.
- Kratzer, Angelika. 1998. “More Structural Analogies Between Pronouns and Tenses.” In Strolovitch, Devon and Aaron Lawson (eds) *Proceedings of Semantics and Linguistic Theory 8*. Ithaca, NY: CLC Publications.

Additional (Optional) Reading:

Abusch, Dorit. 1997. "Sequence of Tense and Temporal *De Re*." *Linguistics and Philosophy* 20: 1-50.

4.2 Variation in the Interpretation of Embedded Tenses
(Approximately Week 3 and 4)

While English sentences like (1) allow for a 'simultaneous reading', morpho-syntactically parallel sentences in many other languages do not. Similarly, while tensed relative clauses like (2) introduce a three-way ambiguity in English, the meanings of such structures can be subtly different in other languages.

Ogihara & Sharvit (2012) provide an in-depth study of the behavior of embedded tenses in the complement clauses and relative clauses of Hebrew and Japanese, which differ in complex ways from what is found in English. Ogihara & Sharvit propose a parametric theory, where languages can differ in whether (i) tense morphology is quantificational or pronominal (Section 4.1), and (ii) whether syntactic movement of a tense creates a lower trace that also bears tense features. Through examination of Ogihara & Sharvit's system, we will get a strong sense of the empirical complexity of the phenomena in (1)-(2), as well as a concrete case study in how such semantic variation can be modeled parametrically.

On the other hand, Altshuler & Schwarzschild (2013) propose that it is actually wrong to describe sentences like (1) in English as being truth-conditionally ambiguous. They begin by noting that past-tense sentences like (3a) often carry an implicature that their corresponding present-tense variants (3b) are false.

- (3) a. Dave was eating.
b. Dave is eating.

Altshuler & Schwarzschild develop a theory of these 'cessation implicatures' in matrix clauses, and then explore its potential predictions for the interpretation of tense in embedded clauses. Importantly, their theory predicts that while (1) in English should be felicitous when Dave said "I am dancing", a morpho-syntactically parallel sentence in Hebrew will not be. In this way, the (apparent) possibility/impossibility of 'simultaneous readings' of embedded past in complement clauses might be derived from pragmatic – rather than syntactic/semantic – mechanisms.

Required Readings:

Ogihara, Toshiyuki and Yael Sharvit. 2012. "Embedded Tenses" In Binnick, Robert (ed) *The Oxford Handbook of Tense and Aspect*. Oxford University Press.

Altshuler, Daniel and Roger Schwarzschild. 2013. "Movement of Change, Cessation Implicatures and Simultaneous Readings." In Chemla, Emmanuel, Vincent Homer, and Gregoire Winterstein (eds) *Proceedings of Sinn und Bedeutung 17*. ENS Paris

Additional (Optional) Reading:

- Altshuler, Daniel and Roger Schwarzschild. 2013. "Correlating Cessation with Double Access." In Aloni, Maria, Michael Franke and Floris Roelofsen (eds) *Proceedings of the 19th Amsterdam Colloquium*. ILLC.
- Altshuler, Daniel, Valentine Hacquard, Tom Roberts, and Aaron White. 2015. "On Double Access, Cessation, and Parentheticality." In D'Antonio, Sarah, C. Little, M. Moroney, and Mia Wiegand (eds), *Proceedings of Semantics and Linguistic Theory 25*. Ithaca, NY: CLC Publications.

4.3 Variation in the Semantics of Perfective and Imperfective Aspect
(Approximately Week 5 and 6)

In English and many other languages, a past perfective sentence like (4a) entails that the resulting event was 'finished'; this can be shown by the anomaly of discourses like (4b).

- (4) a. Dave ate the sandwich.
b. # Dave ate the sandwich, but he didn't finish it.

In some languages, however, sentences that appear to be morphologically parallel to (4a) do not have the same entailment; discourses like (4b) in those languages sound perfectly fine. Such languages are sometimes said to have 'non-culminating accomplishments' or to have 'neutral aspect' (instead of 'perfective'). Bar-El et al. (2005) provide one influential study of this phenomenon in the Salish languages, where they impute the possibility of (4b) to a 'modalized' semantics for perfective in those languages.

Altshuler (2014) pursues a similar intuition, but offers a rather different implementation, embedded within a broader – and stronger – typological theory. Under his theory, the analysis of languages where (4b) is licit can be extended to also account for languages where (some) *imperfectives* have the 'culmination entailment' of English (4b). That is, while (5) is perfectly sensible in English, in some languages (e.g. Russian), a morphologically parallel discourse is anomalous.

- (5) Bill was arriving at the house, but a car hit him, and he never made it to the door.

A rather different semantic typology is developed by Arregui et al. (2014), one that also aims to predict the anomaly of sentences like (5) in certain languages. Their theory, however, is principally limited to cross-linguistic variation in the semantics of *imperfective* (not perfective). Nevertheless, their semantics can account for many intriguingly subtle differences in the semantic behavior of imperfective marking in Romance, Slavic, and Jê languages. Arregui (2014) also notes certain facts captured by their approach that remain challenges for Altshuler.

Required Readings:

- Bar-El, Leora, Henry Davis, and Lisa Matthewson. 2005. "On Non-Culminating Accomplishments." In Bateman, Leah and Cherlon Ussery (eds) *Proceedings of the 35th Annual Meeting of the North East Linguistic Society*. GLSA.

- Altshuler, Daniel. 2014. "A Typology of Partitive Aspectual Operators." *Natural Language and Linguistic Theory* 32: 735-775.
- Arregui, Ana, Maria Luisa Rivero, Andres Salanova. 2014. "Cross-Linguistic Variation in Imperfectivity." *Natural Language and Linguistic Theory* 32: 307-362.

Additional (Optional) Reading:

- Singh, Mona. 1998. "On the Semantics of the Perfective Aspect." *Natural Language Semantics* 6: 171-199.
- Koenig, Jean-Pierre and Nuttanart Muansuwan. 2000. "How to End Without Finishing: Thai Semi-Perfective Markings." *Journal of Semantics* 17: 147-184.
- Arregui, Ana. 2014. "Aspectual Operators Across Languages: A Commentary on the Paper by Daniel Altshuler." *Natural Language and Linguistic Theory* 32: 777-789.

4.4 Varieties of 'Tenseless' Languages (Approximately Week 7 and 8)

Some languages are 'tenseless', in that matrix clauses needn't contain any morphology that we would pre-theoretically call a 'tense'. The following sentence of Lillooet (Salish), for example, only contains a predicate and subject agreement morphology.

- (6) táytkan
hungry.1sgS
*I am hungry / I was hungry / *I will be hungry.* (Matthewson 2006)

Most importantly, sentences lacking tense morphology in 'tenseless' languages are temporally underspecified in their semantics. The Lillooet sentence in (6) can be used to describe either a present or a past state of hunger.

In the past 15 years, such tenseless languages have been the focus of much formal semantic research, and it has arguably been found that – aside from the aforementioned defining property – these languages can differ quite markedly from one another in their temporal semantics. One of the most influential works in this area is that of Matthewson (2006), who begins by noting that while sentences like (6) in Lillooet allow for other past or present construal, they do not allow for future construals. Based upon these and other facts, Matthewson argues that clauses in Lillooet actually *are* tensed, but they bear a phonologically empty non-future tense. This analysis raises the possibility that certain so-called 'tenseless' languages are only superficially so.

On the other hand, Tonhauser (2011) shows that although the pattern of judgments in (6) also holds for simple sentences of Paraguayan Guarani, other facts in the language actually favor a truly tenseless analysis, under which main clauses of Guarani don't bear any tense at all (even a non-future one). Tonhauser argues that the judgments in (6) could follow from certain ontological/pragmatic assumptions regarding the ability to refer to future times, re-raising the possibility that even languages like Lillooet truly are 'tenseless'.

However, complicating matters even further is the case of Hausa, as discussed by Mucha (2013). Mucha notes that – contrary to Lillooet and Guarani – unmarked

sentences like (6) in Hausa readily allow for future construals. Mucha puts forth a tenseless analysis of Hausa that readily captures these and other subtle facts regarding the language. However, the possibility of future construals of tenseless Hausa sentences appears to challenge a purely pragmatic/ontological explanation of the judgment pattern in (6), again re-raising the possibility that languages exhibiting this pattern of judgments actually do have a phonologically null tense specification.

Finally, a rather different variety of ‘tenselessness’ appears to be found in Mandarin Chinese, as studied by Lin (2005). Lin argues that certain so-called ‘aspectual’ particles in Mandarin actually incorporate tense information, while others are truly ‘tenseless’. The resulting picture is one where Mandarin is an intriguing blend of both ‘tensed’ and ‘tenseless’ languages.

Required Readings:

- Matthewson, Lisa. 2006. “Temporal Semantics in a Superficially Tenseless Language.” *Linguistics and Philosophy* 29: 673-713.
- Lin, Jo-Wang. 2005. “Time in a Language Without Tense: The Case of Chinese.” *Journal of Semantics* 23: 1-53.
- Tonhauser, Judith. 2011. “Temporal Reference in Paraguayan Guarani, a Tenseless Language.” *Linguistics and Philosophy* 34: 257-303.
- Mucha, Anne. 2013. “Temporal Interpretation in Hausa.” *Linguistics and Philosophy* 36: 371-415.

Additional (Optional) Readings:

- Bittner, Maria. 2005. “Future Discourse in a Tenseless Language.” *Journal of Semantics* 22: 339-387.

4.5 The Semantics of (Present) Perfect Across Languages
(Approximately Week 9 and 10)

The meaning of the English perfect construction in (7) is a complex problem of long-standing debate, both within theoretical and traditional linguistics.

- (7) a. Present Perfect: Dave has left.
b. Past Perfect: Dave had left.
c. Future Perfect: Dave will have left.

Portner (2003) accessibly lays out the central puzzles relating to the English perfect, as well as several of the major semantic proposals. Portner puts forth an analysis of the English perfect that ascribes to it a rather minimal truth-conditional meaning, but attaches to it a pragmatic condition that could account for many of its noted puzzles.

While Portner addresses a wealth of data related to the English perfect, recent work has aimed to illuminate the behavior of ‘perfect’ constructions across languages, and especially within the IE family. Pancheva (2003) develops a compositional semantics for the perfect – one where it is not actually an aspect on par with ‘(im)perfective’ – which can derive the observed readings that sentences like (7a) have across several different languages. A similar system is put forth by Pancheva & von Stechow (2004) in

order to account for one especially perplexing contrast between the perfect of English and that of other Germanic languages. In English – but not in most other languages – present perfect sentences cannot be modified by past tense adverbials.

(8) Dave has eaten (*yesterday).

The curious anomaly of (8) in English is referred to as the ‘Present Perfect Puzzle’. Pancheva & von Stechow (2004) seek to derive it from special properties of the present tense in English.

Required Readings:

- Portner, Paul. 2003. “The (Temporal) Semantics and (Modal) Pragmatics of the Perfect.” *Linguistics and Philosophy* 26: 459-510.
- Pancheva, Roumyana. 2003. “The Aspectual Makeup of Perfect Participles and the Interpretations of the Perfect.” In Alexiadou, Artemis, M. Rathert, and Arnim von Stechow (eds) *Perfect Explorations*. De Gruyter.
- Pancheva, Roumyana and Arnim von Stechow. 2004. “On the Present Perfect Puzzle.” In Moulton, Kier and Matthew Wolf (eds) *Proceedings of the 34th Annual Meeting of the North East Linguistic Society*. GLSA.

Additional (Optional) Readings:

(Excerpts from) Rothstein, Bjorn. 2008. *The Perfect Time Span: On the Present Perfect in German, Swedish and English*. John Benjamins Publishing Company.

4.6 Do Adnominal Tenses Exist? (Approximately Week 11)

‘Tense’ is almost universally described as a verbal or clausal morphological category.¹ However, it is not *a priori* obvious why this should be the case. After all, as has long been recognized, noun (phrases) are also interpreted relative to an ‘evaluation time’ – just like the main predicate of a sentence. Indeed, sentences like those in (9) show that the evaluation time of a NP and that of the VP can sometimes differ.

- (9) a. [My **wife**] was born in Oregon.
b. [All of the **fugitives**] have been apprehended.

These facts raise the question of whether any languages exhibit something that could be viewed as a ‘nominal tense’ – morphology that would serve to restrict the evaluation time of an NP in a way akin to how tense restricts the evaluation time of the main predicate.

This question was famously answered ‘yes’ by Nordlinger & Sadler (2004), who argue that such ‘nominal tenses’ do indeed occur in the languages of the world. However, Tonhauser (2007) takes a closer look at one of their main examples, the so-called adnominal ‘past’ and ‘future’ marking of Guarani. Tonhauser documents many rather subtle features of the semantics of these morphemes, and provides a formal

¹ Indeed, certain classical grammarians proposed that the defining property of a verb was the ability to take tense morphology.

compositional semantics. A direct consequence of that semantics, however, is that these so-called ‘nominal tenses’ are actually very different in nature from (true) verbal/clausal tenses, and perhaps do not deserve the label ‘tense’ at all.

On the other hand, Thomas (2014) examines the ‘nominal tenses’ found in Mbya, a language very closely related to Guarani. Crucially, in Mbya, the ‘nominal tenses’ can also be appear with verbs, in which case they function precisely like ‘true’ (clausal/verbal) tenses. Thomas therefore puts forth a unified semantics for these markers in Mbya, one that accounts for both their use as clausal tense markers and as ‘nominal tenses’. Furthermore, the special properties of the adnominal uses – which lead Tonhauser (2007) to differentiate them from ‘true’ tenses – are claimed by Thomas to derive from a single, core pragmatic principle. The resulting analysis thus again raises the question of whether ‘nominal tenses’ truly exist.

Required Readings:

Tonhauser, Judith. 2007. “Nominal Tense? The Meaning of Guarani Nominal Temporal Markers.” *Language* 83(4): 831-869.

Thomas, Guillaume. 2014. “Nominal Tense and Temporal Implicatures: Evidence from Mbya.” *Natural Language Semantics* 22: 357-412.

Additional (Optional) Readings:

Nordlinger, Rachel and Louisa Sadler. 2004. “Nominal Tense in Crosslinguistic Perspective.” *Language* 80(4): 776-806.

4.7 The Semantics of Graded Tenses (Approximately Week 12)

The traditional notion of tense commonly encompasses the three-fold distinction between ‘past’, ‘present’, and ‘future’. However, in many languages, the tense morphology appears to make finer distinctions, and additionally serves to indicate *how far* into the past or future a given event occurs. Such languages are sometimes said to have ‘graded tense’ systems.

Despite the pioneering work of Johnson (1981), and extensive study by descriptive grammarians, graded tense systems have not received much attention from formal semanticists. Cable (2013) provides in-depth study of the rather elaborate graded tense system found in Kikuyu (Bantu). Cable argues that, contrary to traditional description, these morphemes are not actually ‘tenses’ in the Neo-Reichenbachian (Kleinian) sense. That is, he shows that these morphemes do not restrict the relation between the evaluation time and a Reference Time, but rather relate the evaluation time to the Event Time directly. Consequently, Cable puts forth a compositional semantics where these morphemes do not occupy a position within the TP of Kikuyu, but instead sit in a lower position closer to the verbal and aspectual projections. This analysis raises the question of whether ‘true’ (Neo-Reichenbachian) tenses can ever be shown to be ‘graded’.

On the other hand, Cable (2015) examines the behavior of graded tenses in the embedded clauses of four languages (Kikuyu, Shona, Luganda, and Inuktitut), and finds that in all four languages a complex set of generalizations is obeyed. Cable shows that

morphemes in question express a special category of tense, one that has been labeled ‘discontinuous past’ by Plungian & van der Auwera (2006).

Cable (2015), however, provides in-depth investigation of the alleged ‘discontinuous past’ marker of the Tlingit language, and argues that the special inferences of that morpheme are not semantic. Instead, they appear to be defeasible pragmatic inferences, which would suggest that putative cases of ‘discontinuous past’ are in their semantics simply (plain) past tenses. Cable provides a formalized analysis of the pragmatic inferences associated with these past tenses, whereby they ultimately follow from (i) the optionality of the tense markers in question, and (ii) a special principle relating to the inherent topicality of the utterance time.

These empirical and analytic results align well with a restrictive theory of cross-linguistic variation in tense semantics, one where the ‘traditional’ categories of PAST, PRESENT, and FUTURE are the only ones representable in human language.

Required Readings:

Cable, Seth. 2015. “The Tlingit Decessive and ‘Discontinuous Past’: The Curious Implicatures of Optional Past Tense.” Manuscript. UMass Amherst.

Additional (Optional) Readings:

Plungian, Vladamir A. and Johan van der Auwera. 2006. “Towards a Typology of Discontinuous Past Marking.” *Sprachtypologie und Universalienforschung* 59: 317-349.